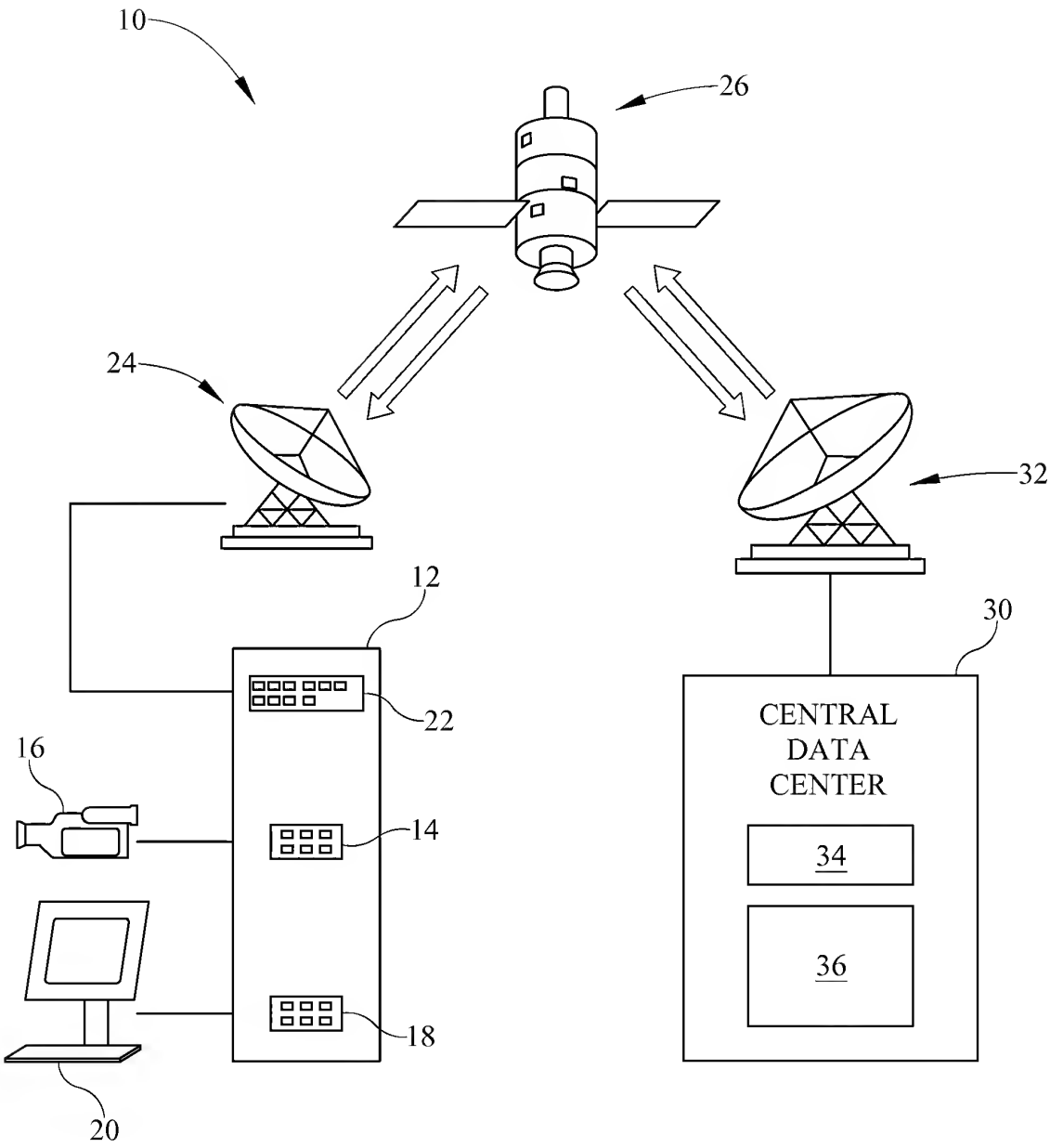

FIG. 1

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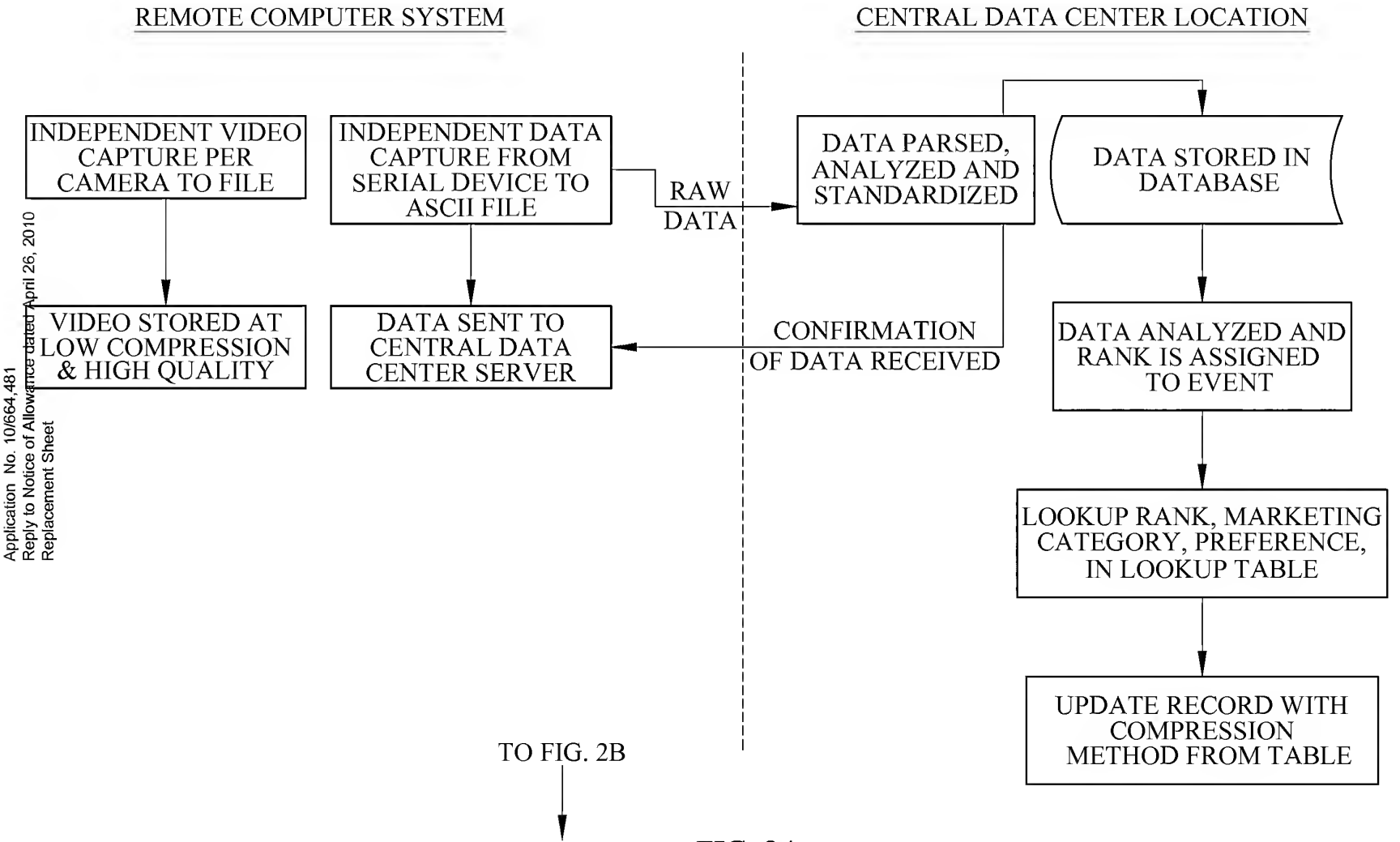

FIG. 2A

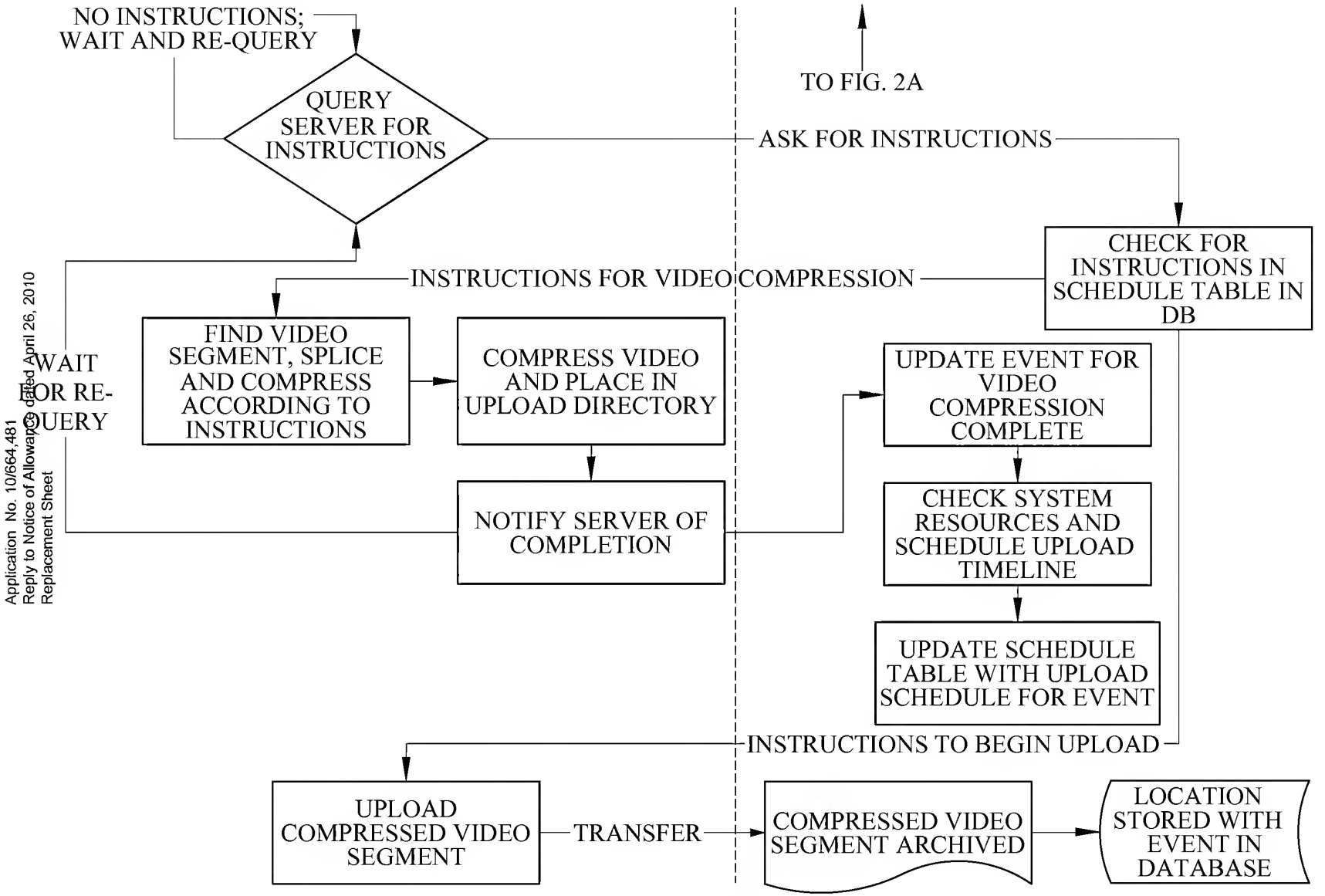

FIG. 2B

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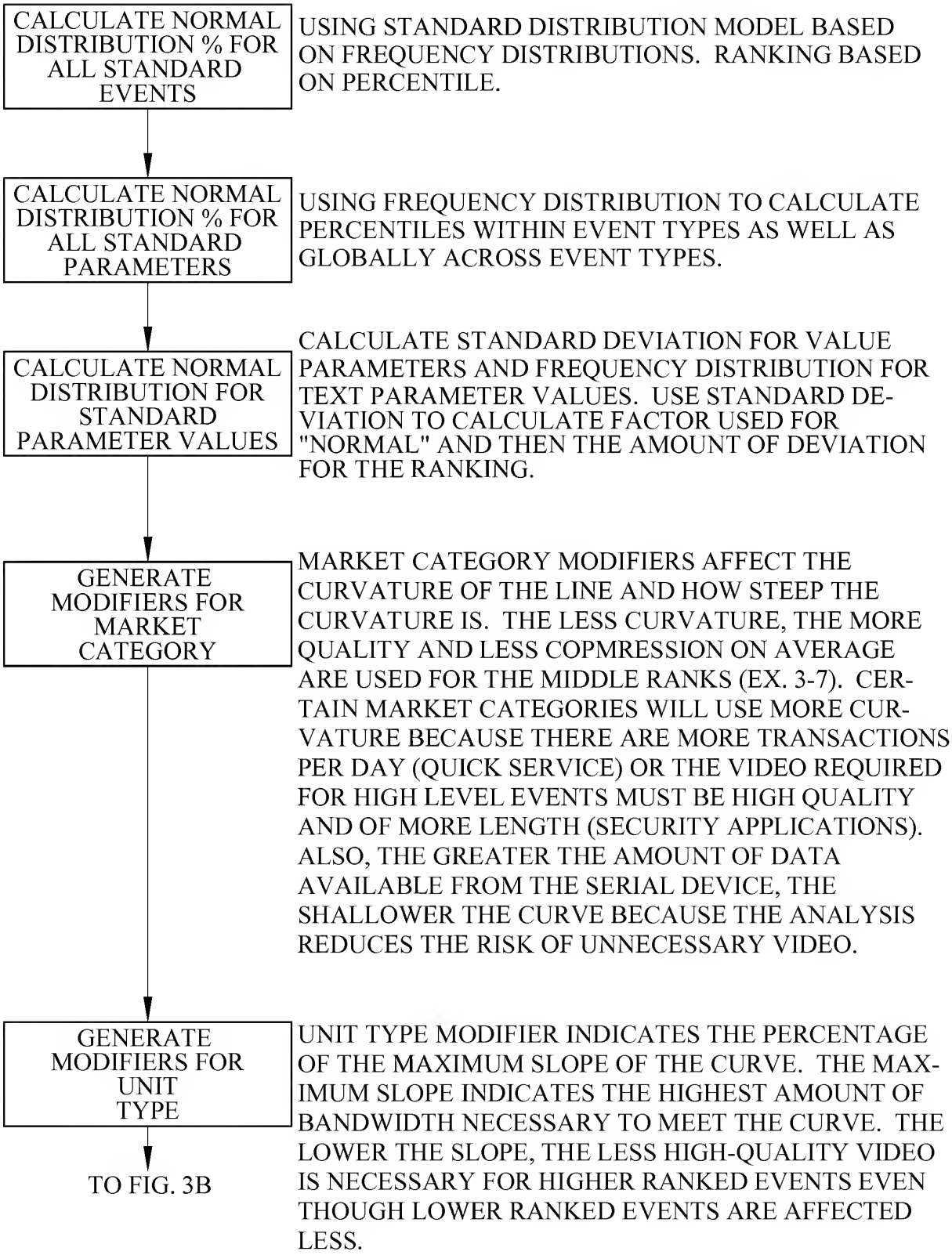
CALCULATE NORMAL DISTRIBUTION % FOR ALL STANDARD EVENTS
USING STANDARD DISTRIBUTION MODEL BASED ON FREQUENCY DISTRIBUTIONS. RANKING BASED ON PERCENTILE.
CALCULATE NORMAL DISTRIBUTION % FOR ALL STANDARD PARAMETERS
USING FREQUENCY DISTRIBUTION TO CALCULATE PERCENTILES WITHIN EVENT TYPES AS WELL AS GLOBALLY ACROSS EVENT TYPES.
CALCULATE NORMAL DISTRIBUTION FOR STANDARD PARAMETER VALUES
CALCULATE STANDARD DEVIATION FOR VALUE PARAMETERS AND FREQUENCY DISTRIBUTION FOR TEXT PARAMETER VALUES. USE STANDARD DE-VIATION TO CALCULATE FACTOR USED FOR "NORMAL" AND THEN THE AMOUNT OF DEVIATION FOR THE RANKING.
GENERATE MODIFIERS FOR MARKET CATEGORY
MARKET CATEGORY MODIFIERS AFFECT THE CURVATURE OF THE LINE AND HOW STEEP THE CURVATURE IS. THE LESS CURVATURE, THE MORE QUALITY AND LESS COPMRESSION ON AVERAGE ARE USED FOR THE MIDDLE RANKS (EX. 3-7). CER-TAIN MARKET CATEGORIES WILL USE MORE CUR-VATURE BECAUSE THERE ARE MORE TRANSACTIONS PER DAY (QUICK SERVICE) OR THE VIDEO REQUIRED FOR HIGH LEVEL EVENTS MUST BE HIGH QUALITY AND OF MORE LENGTH (SECURITY APPLICATIONS). ALSO, THE GREATER THE AMOUNT OF DATA AVAILABLE FROM THE SERIAL DEVICE, THE SHALLOWER THE CURVE BECAUSE THE ANALYSIS REDUCES THE RISK OF UNNECESSARY VIDEO.
GENERATE MODIFIERS FOR UNIT TYPE
UNIT TYPE MODIFIER INDICATES THE PERCENTAGE OF THE MAXIMUM SLOPE OF THE CURVE. THE MAX-IMUM SLOPE INDICATES THE HIGHEST AMOUNT OF BANDWIDTH NECESSARY TO MEET THE CURVE. THE LOWER THE SLOPE, THE LESS HIGH-QUALITY VIDEO IS NECESSARY FOR HIGHER RANKED EVENTS EVEN THOUGH LOWER RANKED EVENTS ARE AFFECTED LESS.
TO FIG. 3B

FIG. 3A

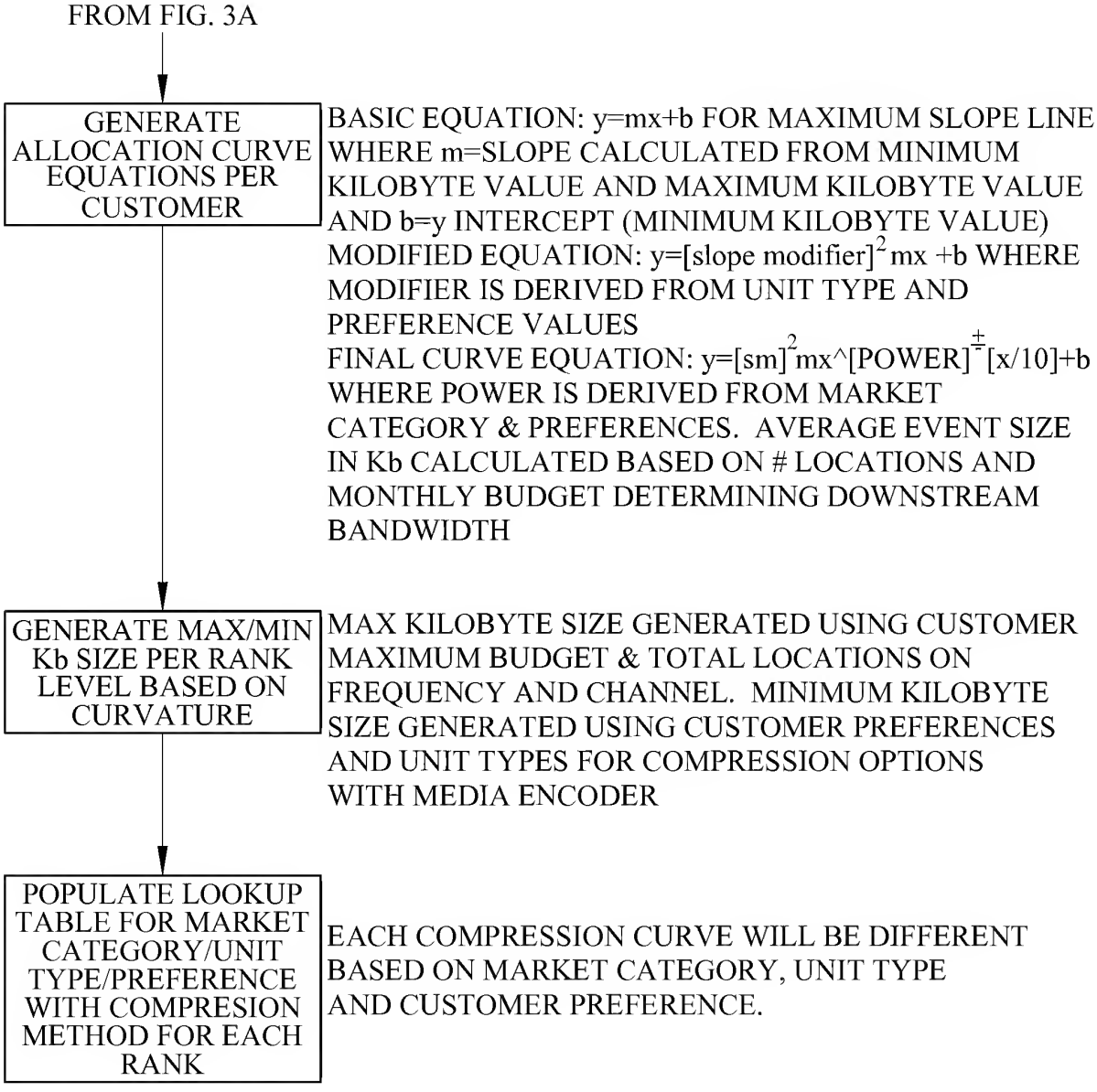
FROM FIG. 3A
GENERATE ALLOCATION CURVE EQUATIONS PER CUSTOMER
BASIC EQUATION: y=mx+b FOR MAXIMUM SLOPE LINE WHERE m=SLOPE CALCULATED FROM MINIMUM KILOBYTE VALUE AND MAXIMUM KILOBYTE VALUE AND b=y INTERCEPT (MINIMUM KILOBYTE VALUE)
MODIFIED EQUATION: y=[slope modifier]2 mx +b WHERE MODIFIER IS DERIVED FROM UNIT TYPE AND PREFERENCE VALUES
FINAL CURVE EQUATION: y=[sm]2mx^[POWER]±[x/10]+b WHERE POWER IS DERIVED FROM MARKET CATEGORY & PREFERENCES. AVERAGE EVENT SIZE IN Kb CALCULATED BASED ON # LOCATIONS AND MONTHLY BUDGET DETERMINING DOWNSTREAM BANDWIDTH
GENERATE MAX/MIN Kb SIZE PER RANK LEVEL BASED ON CURVATURE
MAX KILOBYTE SIZE GENERATED USING CUSTOMER MAXIMUM BUDGET & TOTAL LOCATIONS ON FREQUENCY AND CHANNEL. MINIMUM KILOBYTE SIZE GENERATED USING CUSTOMER PREFERENCES AND UNIT TYPES FOR COMPRESSION OPTIONS WITH MEDIA ENCODER
POPULATE LOOKUP TABLE FOR MARKET CATEGORY/UNIT TYPE/PREFERENCE WITH COMPRESION METHOD FOR EACH RANK
EACH COMPRESSION CURVE WILL BE DIFFERENT BASED ON MARKET CATEGORY, UNIT TYPE AND CUSTOMER PREFERENCE.

FIG. 3B

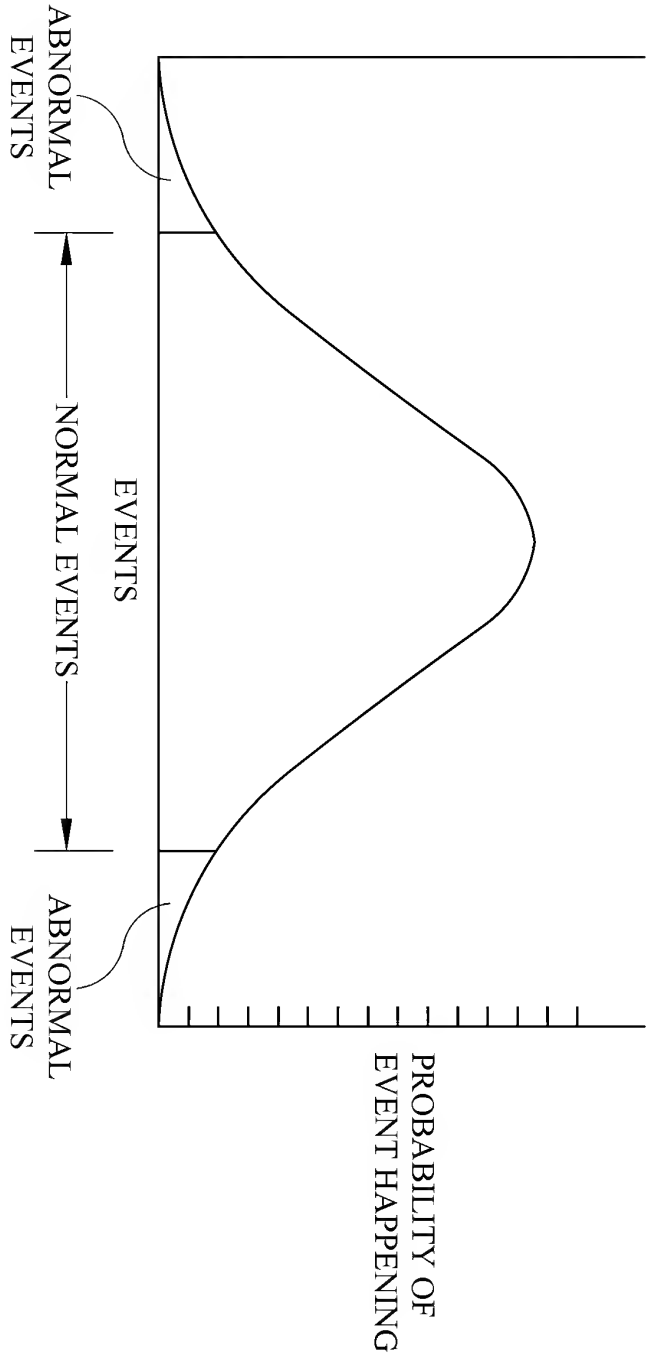
ABNORMAL EVENTS
NORMAL EVENTS
EVENTS
ABNORMAL EVENTS
PROBABILITY OF EVENT HAPPENING

FIG. 4

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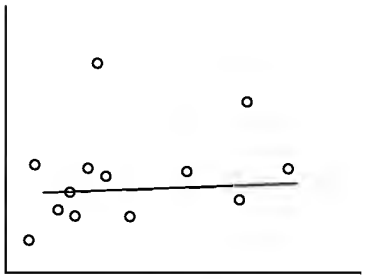

FIG. 5

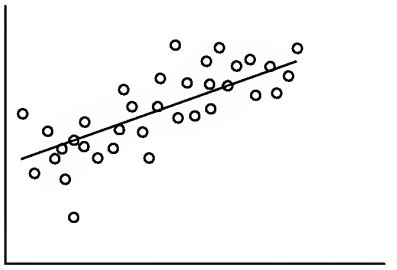

FIG. 6

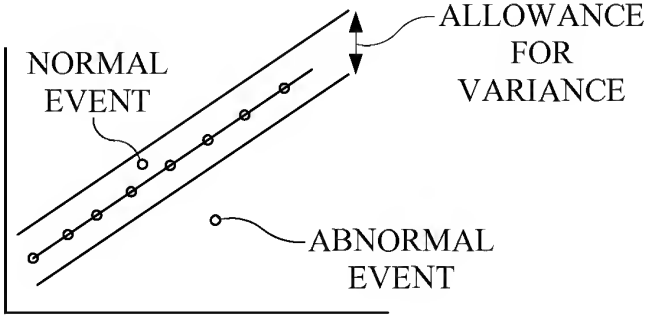

FIG. 7

STANDARD CONFIGURATION	EVENT CRITICALITY										AVERAGE BANDWIDTH (Kb)	PROBABLE BANDWIDTH (Kb)
	0	1	2	3	4	5	6	7	8	9		
1	15	20	25	30	35	40	45	50	75	100	35.7	25.8
2	20	20	25	30	50	50	50	75	100	110	35.7	30.1
3	25	30	35	40	60	60	60	85	110	120	35.7	38.6
4	30	40	45	50	70	70	70	95	120	130	35.7	47.1

FIG. 8

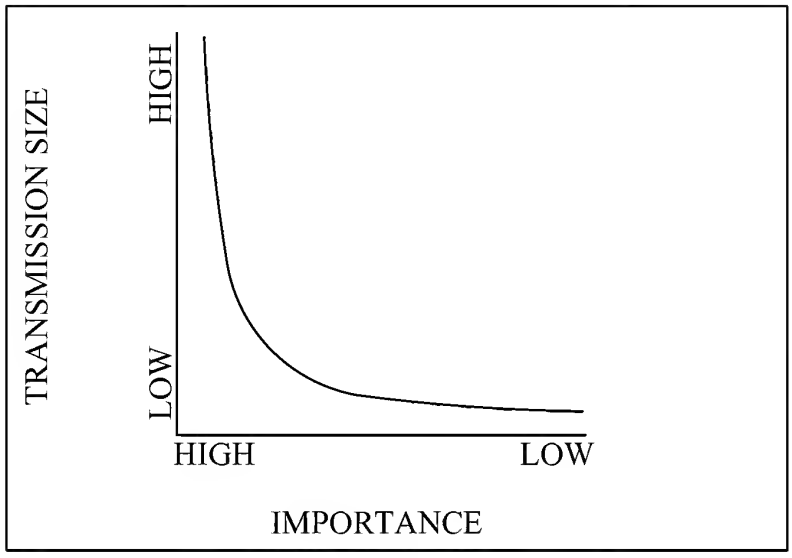
TRANSMISSION SIZE
HIGH
LOW
HIGH
LOW
IMPORTANCE

FIG. 9

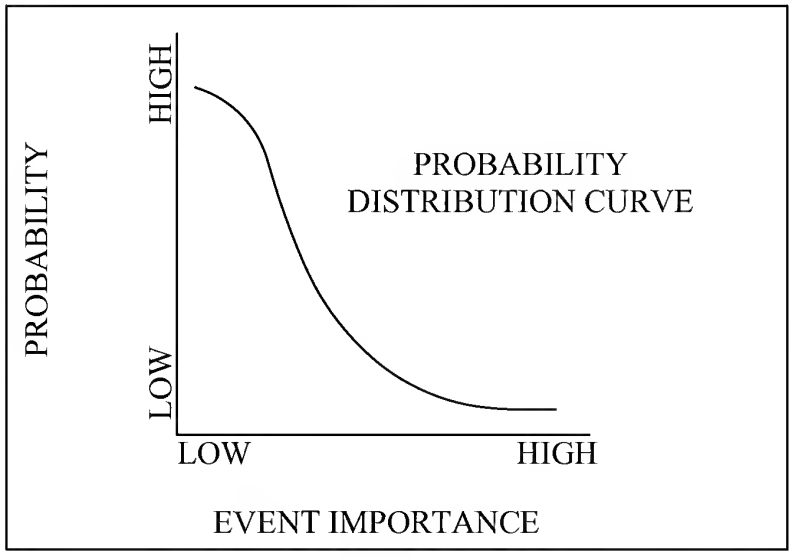
PROBABILITY
HIGH
LOW
PROBABILITY
DISTRIBUTION CURVE
LOW
HIGH
EVENT IMPORTANCE

FIG. 10